

CHAPTER VII

FAA WORKLOAD MEASURES

The FAA provides the aviation community with three distinct air traffic services: 1) air traffic control tower service at FAA and contract towered airports; 2) traffic surveillance and aircraft separation by air route traffic control centers (ARTCC); and 3) flight planning and pilot briefings at flight service stations (FSS). All four aviation system user groups--air carriers, commuter/air taxi, general aviation, and military--use these FAA operational services to enhance the flow and safety of aviation traffic.

Because the four aviation system user groups differ in the demands they impose on the air traffic system, multiple indicators are used to describe the total FAA operational workload. No single measure typifies past trends or future demand for the services provided by the FAA.

number of contract towered airports increased by one to 218. Between 1990 and 2000, the number of FAA towered airports declined by 136, and the number of contract towered airports increased by 214. However, the number of FAA towers has remained constant at 266 since 2000 and is expected to remain at that number throughout the duration of the forecast.

The addition and/or removal of airports to/from FAA air traffic counts make comparisons to previous year's activity levels difficult, if not impossible. To overcome these discontinuities, the FAA reports air traffic activity at FAA and contract tower facilities on both an individual as well as a combined basis. Activity at FAA air route traffic control centers is not affected by the tower conversions.

REVIEW OF 2003¹

During 2003 the number of FAA towered airports remained unchanged at 266, while the

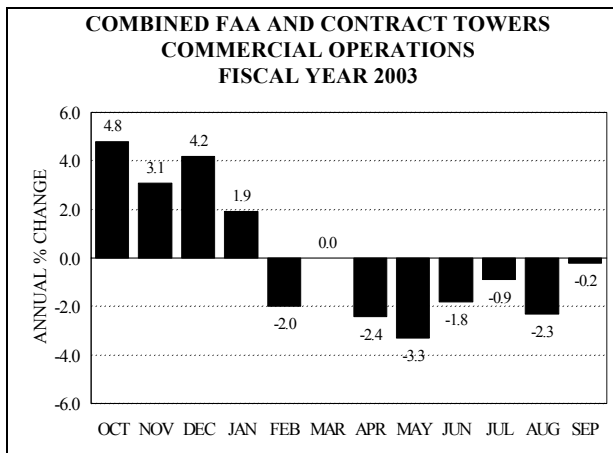
¹ All specified years are fiscal years (October through September 30), unless designated otherwise.

TOWER ACTIVITY

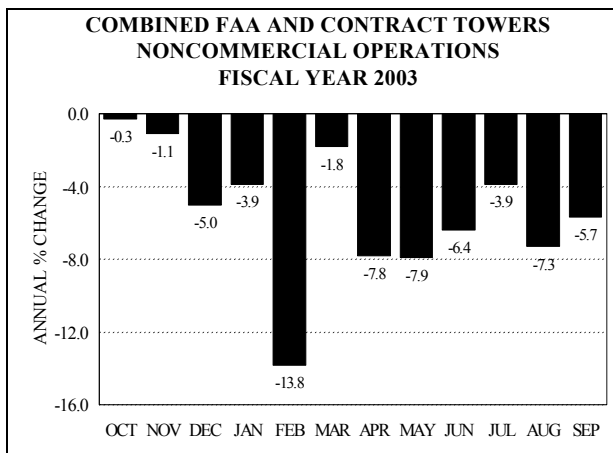
Combined FAA and Contract Towers

Aircraft activity at the 483 FAA and contract towered airports totaled 62.7 million operations, down 3.3 percent from 2002. In 2003, commercial activity was unchanged from 2002

as declines in the second half of the year offset increases in the first half. Air carrier operations driven by declining traffic and schedule reductions following the beginning of the Iraq war and the outbreak of SARS were down 2.9 percent.



Operations by commuter/air taxi increased 3.6 percent in 2003, to 11.4 million. Much of the growth was the result of the transfer of lower density, short-haul markets to commuters, especially the regional jet operators. In addition, growth in recent years has been stimulated by commuter code-sharing and schedule tie-in agreements with the larger commercial air carriers.



Noncommercial activity (the sum of general aviation and military operations) decreased 5.4 percent in 2003 driven by a fall in general aviation activity. General aviation operations

were down 5.5 percent with every month posting negative growth. General aviation itinerant operations were down 5.5 percent and local operations declined 5.6 percent. Military activity was down 1.8 percent with itinerant operations down 1.5 percent and local activity down 2.2 percent.

FAA Towers

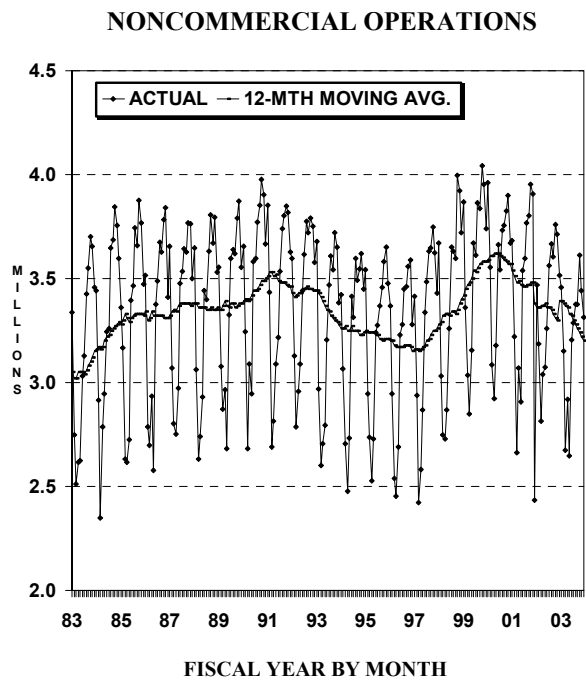
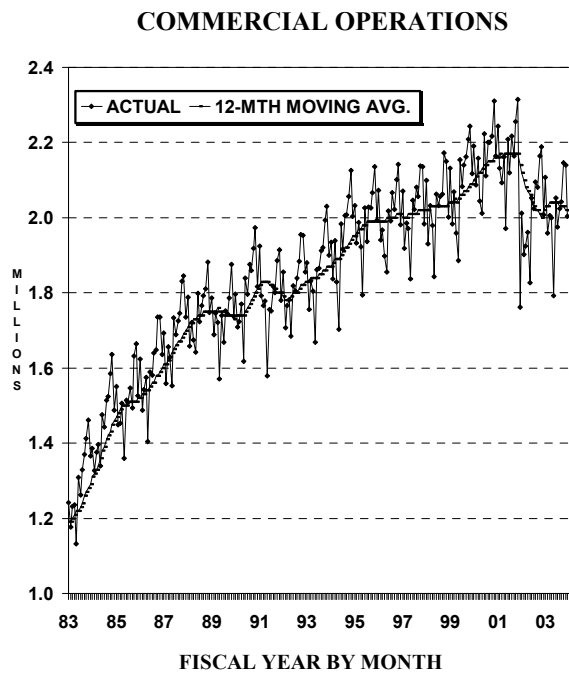
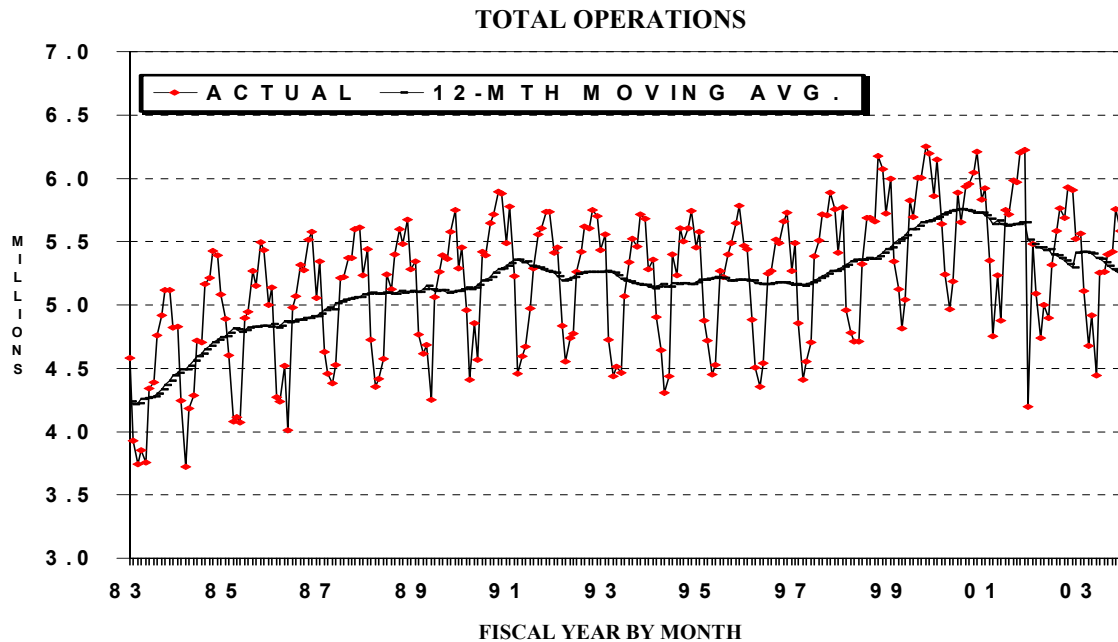
On September 30, 2003, there were 266 FAA towered airports. Aircraft operations at these airports totaled 47.0 million, down 3.2 percent from 2002. Of the four users of the system, only commuter/air taxi operations increased during the year, up 4.4 percent. The other users of the system--air carrier, general aviation, and military were down 3.0, 6.2, and 4.3 percent, respectively.

Contract Towers

On September 30, 2003, there were 218 contract towers funded either partially or fully by the FAA. Aircraft activity totaled 15.7 million operations, down 3.6 percent from 2002. Commercial activity decreased 1.5 percent, while noncommercial activity fell 3.8 percent. In 2003 commuter/air taxi operations decreased 1.7 percent while air carrier activity remained flat. General aviation operations decreased by 4.3 percent while military operations rose 2.9 percent. General aviation continues to dominate activity at FAA contract towers, accounting for 82.1 percent of total operations.

Monthly operation counts for the 266 FAA towered airports and the 218 contract towers, by user group, can be found on the internet at: <http://www.apo.data.faa.gov/>.

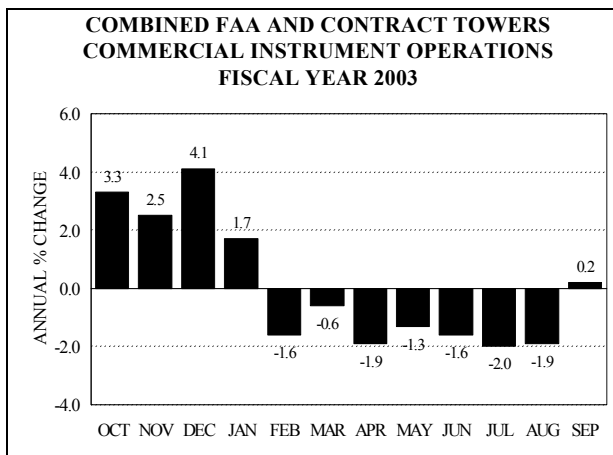
COMBINED FAA AND CONTRACT TOWERS: AIRPORT OPERATIONS



INSTRUMENT OPERATIONS

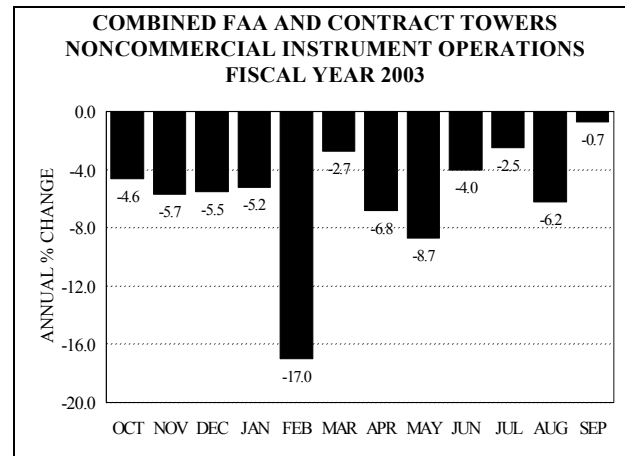
Combined FAA and Contract Towers

Instrument operations handled at combined FAA and contract towers totaled 48.2 million, down 2.7 percent from the 2002 activity level. In 2003, FAA towers accounted for 98.3 percent of combined total instrument operations.



Commercial instrument operations remained flat with 2002 levels at 26.3 million. Increases in the first 4 months of the year were offset by decreases in the last 8 months of the year, reflecting the SARS outbreak and the beginning of the Iraq war. Air carrier activity was down 2.7 percent for the year, while commuter/air taxi instrument operations increased 3.3 percent.

Noncommercial instrument operations fell 5.7 percent to 21.9 million. Year over year decreases in activity were recorded in every month. General aviation operations were down 5.2 percent for the year, but still accounted for 38.6 percent of total instrument operations. Military operations fell 8.3 percent, and accounted for only 6.8 percent of the total.



FAA Towers

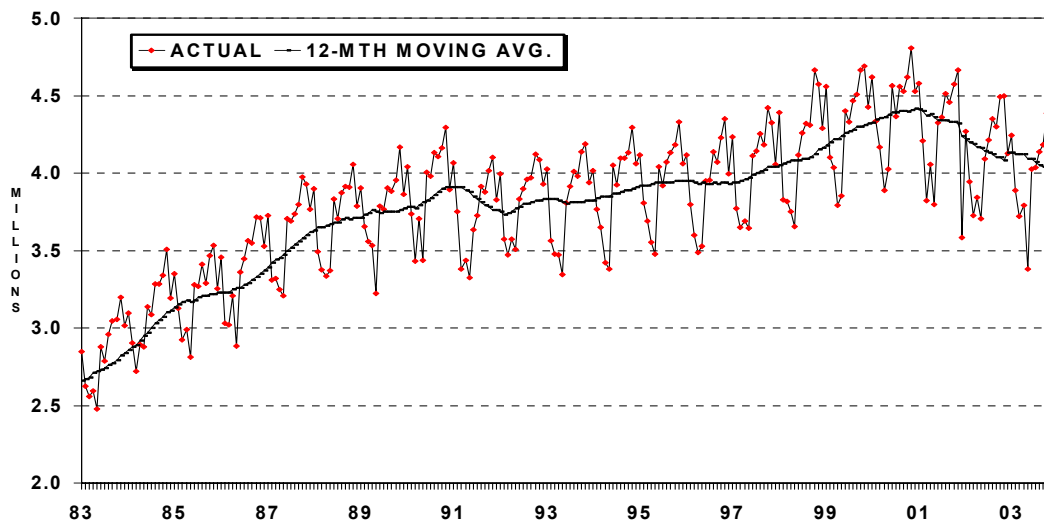
Instrument operations at the 266 FAA towered airports totaled 47.4 million, a decrease of 2.7 percent. Commercial activity was flat, while noncommercial operations fell 5.8 percent. In 2003, only commuter/air taxi activity increased, up 3.4 percent. Air carrier, general aviation, and military instrument operations decreased 2.6, 5.3, and 8.5 percent, respectively.

Contract Towers

Instrument operations at FAA contract towered airports totaled 813,400, down 0.1 percent from 2002. Commercial activity decreased 1.3 percent, while noncommercial activity was up 1.8 percent. In 2003, air carrier instrument operations at FAA contract towers recorded the only decrease in activity, down 6.1 percent. Commuter/air taxi and military instrument operations each increased 0.3 percent while general aviation instrument operations increased by 2.1 percent.

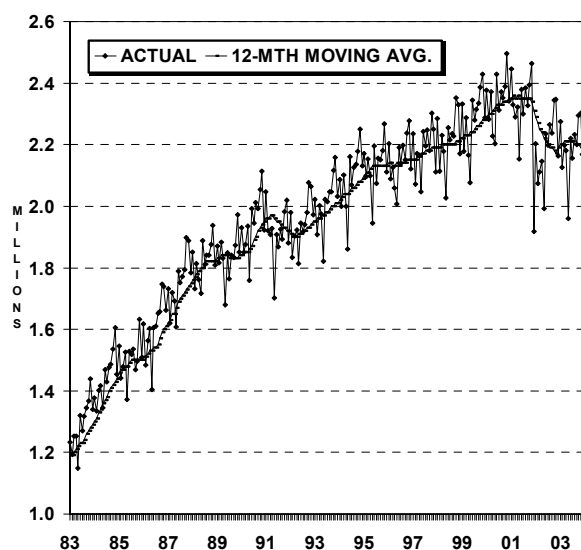
COMBINED FAA AND CONTRACT TOWERS: INSTRUMENT OPERATIONS

TOTAL OPERATIONS



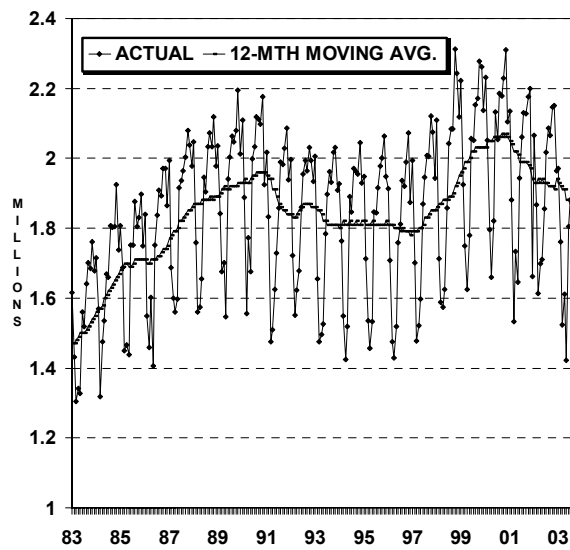
FISCAL YEAR BY MONTH

COMMERCIAL OPERATIONS



FISCAL YEAR BY MONTH

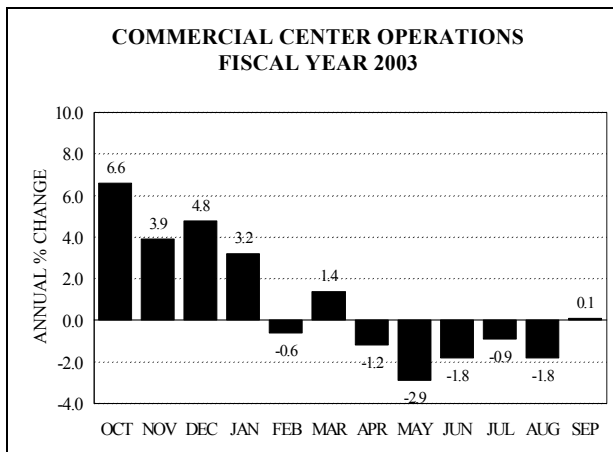
NONCOMMERCIAL OPERATIONS



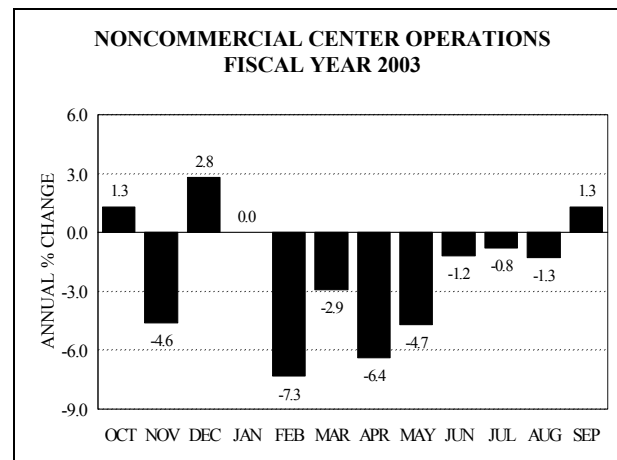
FISCAL YEAR BY MONTH

CENTER ACTIVITY

In 2003, the number of aircraft flying under Instrument Flight Rules (IFR) handled by FAA ARTCCs totaled 43.7 million, unchanged from the 2002 activity counts. The number of commercial aircraft handled at the Centers (31.9 million) rose 0.8 percent in 2003 with year over year increases occurring during the first half of the year. The number of air carrier aircraft handled totaled 22.7 million (down 0.3 percent), while the number of commuter/air taxi aircraft handled totaled 9.1 million (up 3.8 percent).



The number of noncommercial aircraft handled (11.9 million) fell 2.0 percent. After posting increases in 3 of the first 4 months of the year, year-over-year changes in noncommercial aircraft posted declines in the remaining months except for September. The number of general aviation aircraft handled totaled 8.0 million (down 2.2 percent), while military activity totaled 3.9 million (down 1.7 percent).



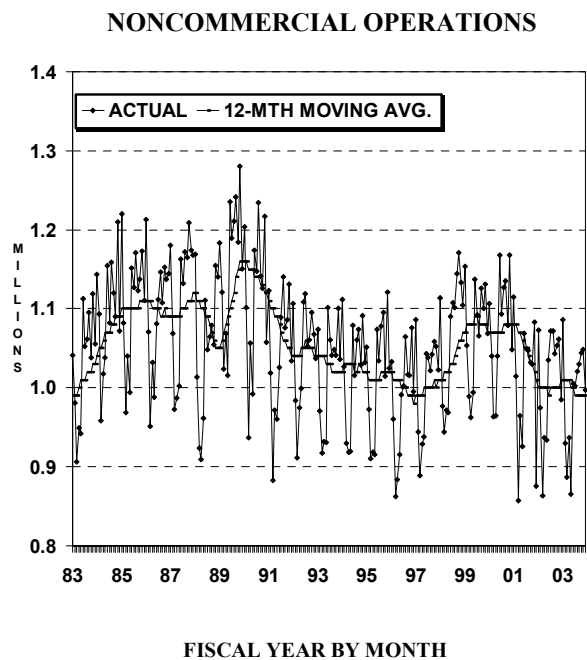
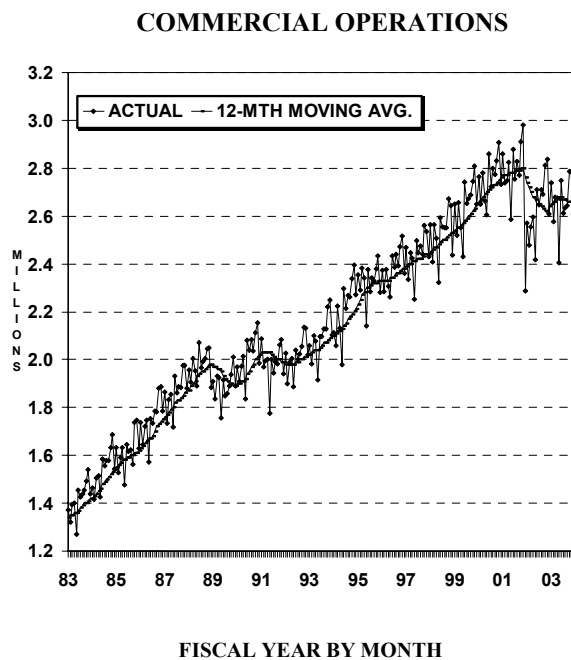
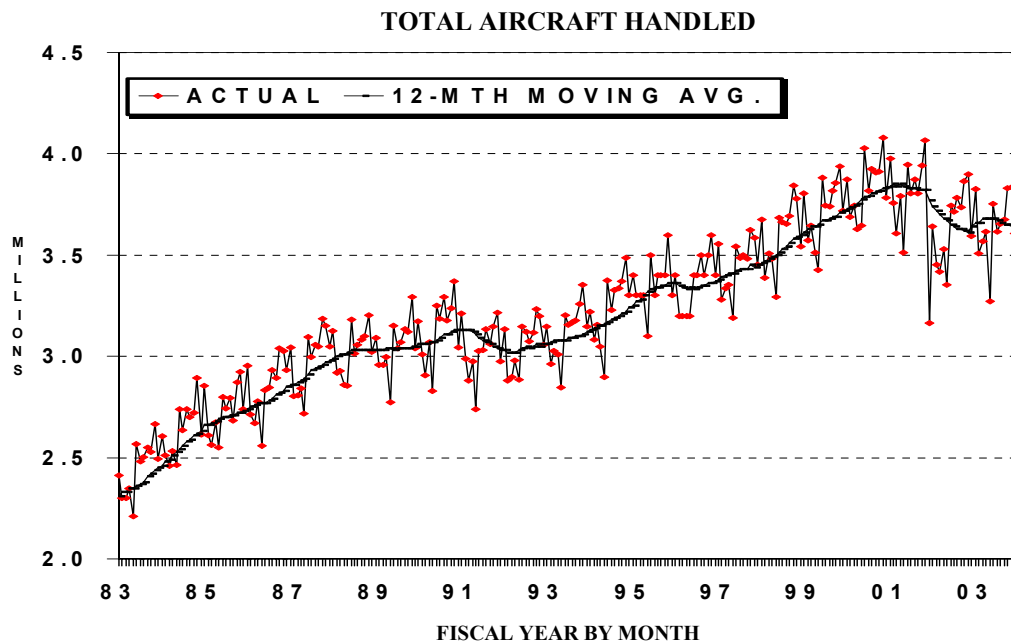
FLIGHT SERVICE STATION ACTIVITY

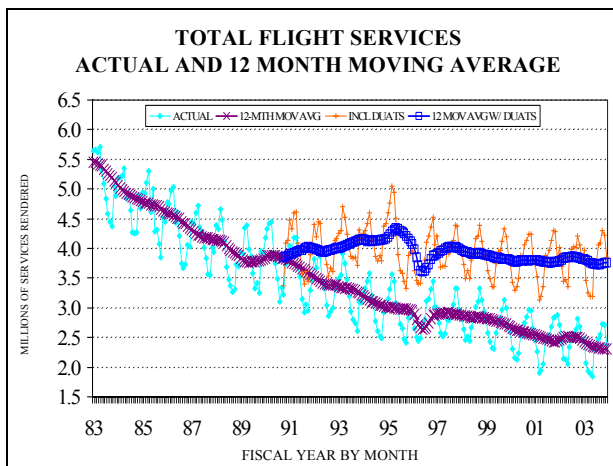
Total flight services, encompassing pilot briefings, flight plans filed, and aircraft contacts recorded by FAA Flight Service Stations (FSS) totaled 27.7 million in 2003, down 6.0 percent from 2002 activity levels. In 2003, the number of aircraft contacted fell 5.4 percent to 2.81 million, the number of pilot briefings declined by 6 percent to 7.01 million, and the number of flight plans originated decreased 6.1 percent to 5.42 million.

The FAA also provides automated flight services, which supplement FSS activity. The Direct User Access Terminal System (DUATS) provides an alternative to the FSS for obtaining pilot briefing information and filing flight plans. Use of this service was introduced in February 1990.

In 2003, total DUATS transactions (including flight plans) totaled 17.5 million, an increase of 6.0 percent over 2002. The number of flight plans filed through DUATS rose 10.3 percent to 1.3 million. The number of DUAT transactions (excluding flight plans) increased 5.3 percent in 2003, from 7.1 million in 2002 to 7.5 million.

FAA AIR ROUTE TRAFFIC CONTROL CENTERS: IFR AIRCRAFT HANDLED





When these DUAT services are included with traditional FSS services, total flight services fell from 45.9 million in 2002 to 45.2 million in 2003, a decrease of 1.7 percent.

FORECAST ASSUMPTIONS

Forecast growth in FAA workload measures includes not only the demand imposed on the existing National Airspace System, but also aviation activity at new locations not previously provided with FAA services. Workload forecasts are presented for combined FAA and contract towers, and separately for FAA facilities and contract towers.

NUMBER OF FAA FACILITIES

There were 266 FAA towered airports on September 30, 2003. There are 148 radar service areas--47 terminal radar service areas, 15 class B (terminal control areas), and 86 class C (airport radar service areas). The number of FSSs and AFSSs totaled 75 on September 30, 2003: 61 AFSSs and 14 Alaskan rotational FSSs.

In 2004, the number of contract tower airports will increase from 218 to 231 and are assumed to remain at that level over the remainder of the forecast period. The number of FAA towers is assumed to remain at 266 throughout the forecast period.

COMMERCIAL AVIATION: RISKS AND UNCERTAINTIES

Although growth in demand for commercial aviation services is based upon continued growth in the U. S. economy, lower industry operating costs, lower fares, lower fuel costs, and financial stability, there is uncertainty associated with these forecasts. A number of events could alter the short and long-term environment, and cause demand to differ substantially from the projections presented in this report. Also, structural changes in the industry could change the mix of operations at FAA facilities.

The events of September 11th have had a significant impact on the demand for aviation services. A rebound from the lows in 2003 is forecast to begin in 2004 and then a return to long-term growth trends is assumed beginning in 2006. Increased demand is initially met by utilizing the existing fleet more intensively and by achieving higher load factors. Ultimately the increase in demand leads to increases in aviation activity.

The introduction of state-of-the-art jet aircraft into the regional/commuter fleet coupled with the financial aftermath of September 11th is significantly altering the route system of the industry. These new aircraft are greatly expanding the number of markets that regional/commuters can serve. Should the number of route transfers or new markets greatly

exceed current expectations, commuter/air tax operations at FAA facilities could be higher than currently forecast. Conversely, air carrier operations would be lower.

Further, with the financial condition of the U.S. airline industry poor, it is conceivable that one or more of the existing carriers will not survive. If the structure of the industry were to change as a result of a failure of a major carrier, it is likely that operations at some FAA facilities would be greatly impacted.

WORKLOAD FORECASTS

METHODOLOGY

The workload measures for airports with air traffic control towers are the number aircraft operations (sum of landings and takeoffs) and instrument operations (arrivals and departures at primary and secondary airports, and overflights). The workload measure for ARTCCs is the number of aircraft handled (sum of departures, landings, and overflights for aircraft operating under instrument flight rules). For flight service stations, the workload measures are flight plans filed, pilot briefings, and aircraft contacts. The workload measures are developed by user category for all three components of the air traffic control system.

Projections of total operations for commercial air carriers and commuter/air taxis at airports with air traffic control towers are based upon forecasts of Available Seat Miles (ASMs), and assumptions regarding average seats per

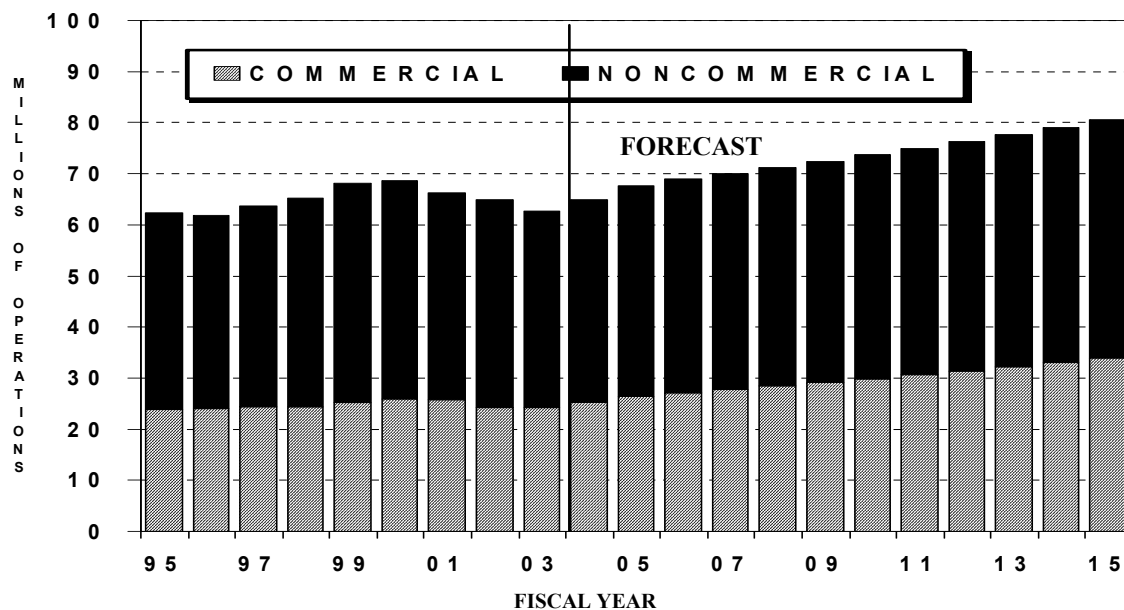
aircraft, and aircraft stage length. Specifically, if the average number of seats per aircraft is divided into the forecast of ASMs, an estimate of the number of aircraft miles in the system is derived. The average aircraft stage length is then divided into the forecast of aircraft miles in order to derive an estimate for departures. For both air carriers and cargo operators, estimates are made for both international and domestic departures. An estimate of total operations for the air carrier and commuter/air taxis is derived by doubling the number of departures. Forecasts of general aviation airport operations are developed from projections of general aviation hours flown and the general aviation fleet.

Forecasts of instrument operations for airports with air traffic control towers, and the workload measures for ARTCCs and flight service stations are derived from the forecasts of airport operations by user category. With the exception of service at the 13 new contract towers, military operations are assumed to remain at current levels throughout the forecast period.

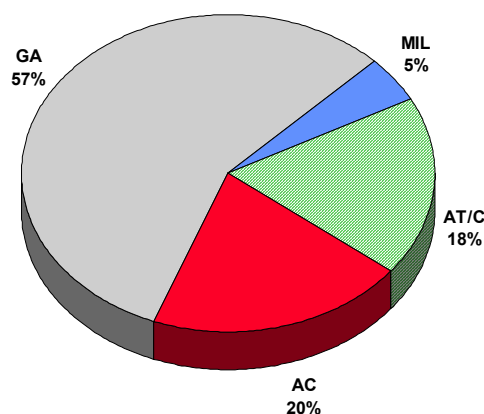
TOWER ACTIVITY

It is assumed that the number of FAA control towers will remain constant at 266 throughout the forecast period. The number of contract towers is expected to increase by 13 to 231 in 2004 and remain at that level for the duration of the forecast. It is assumed that the 13 new towers will be phased in throughout 2004. As such, the addition of the new towers will impact contract tower operations in both 2004 and 2005.

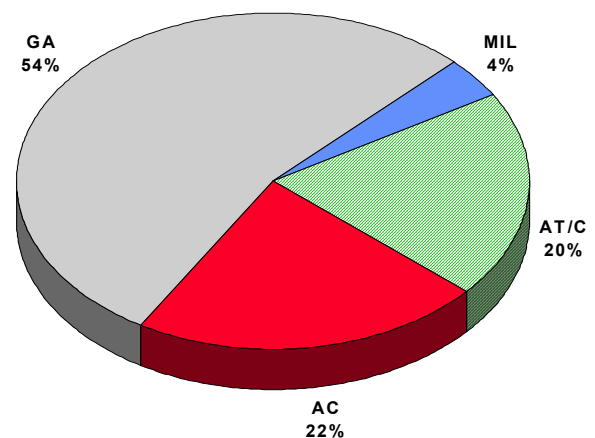
AIRCRAFT OPERATIONS AT AIRPORTS WITH FAA AND CONTRACT TRAFFIC CONTROL SERVICE



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2003



2015

Combined FAA and Contract Towers

During the 12-year forecast period, operations at FAA and contract towered airports grow to 80.5 million by 2015, increasing 2.1 percent annually on average. Growth in tower activity in 2004 is projected to increase 3.4 percent with increases in all activity categories. As the demand for aviation services recovers so does the level of activity. For the balance of the forecast from 2005 to 2015, tower activity is projected to increase an average of 1.8 percent per year. Commercial activity is forecast to grow at relatively faster rates than general aviation. Air carrier operations share of the combined towered airport activity increases 1.9 points from 20.4 percent in 2003 to 22.3 percent in 2015 while the commuter/air taxi share increases 1.7 points from 18.2 percent in 2003 to 19.9 percent. The general aviation share of activity declines from 56.6 percent in 2003 to 53.9 percent by 2015. Commuter/air taxi activity is projected to grow at rates faster than that forecast for the larger commercial air carriers during the early years of the forecast, with accelerating route transfers and increased use of regional jets the primary drivers.

In 2003, air carrier operations declined from 13.2 to 12.8 million operations, a 2.9 percent decrease. As the demand for commercial air travel recovers in 2004 and 2005, air carrier operations increase 2.2 and 4.2 percent respectively, and then grow an average of 2.7 percent per year for the remainder of the forecast period. However, air carrier operations do not return to the 2000 level of activity until 2009. For the entire 12-year forecast period, air carrier operations increase at a rate of 2.8 percent annually.

Commuter/air taxi activity grows an average of 5.4 percent per year in 2004 and 2005 and then increases at a 2.3 percent annual rate over the remainder of the forecast. Over the 12-year

forecast period, commuter/air taxi operations grow an average of 2.9 percent annually, increasing from 11.4 to 16.0 million operations. General aviation activity increases 3.2 percent in 2004 and 4.2 percent in 2005, primarily due to the addition of 13 new contract towers. For the remainder of the forecast, general aviation operations increase at a rate of 1.3 percent per year. For the entire forecast period, general aviation operations increase from 35.5 to 43.4 million operations (1.7 percent annual growth). Itinerant general aviation operations are forecast to increase 21.8 percent over the period, while local general aviation operations are projected to increase 23 percent over the period. Total military operations are projected to increase to 3.1 million by 2005 then remain at that level throughout the balance of the forecast period.

Commercial aircraft activity at combined towered airports is projected to increase 4.0 percent in 2004, with increases in both air carrier and commuter/air taxi activity. By 2005, commercial aircraft activity returns to the level of activity in 2000, the worst year on record for delays. Should activity increases occur without an increase in system capacity, significant congestion problems may result.

However, the mix of traffic will be significantly different than existed in 2000. In 2000, air carrier operations accounted for 58.5 percent of total commercial operations. By 2005, it is expected that the air carrier share of commercial operations will decline to 51.9 percent. The surge in regional jet activity adds to the complexity of the FAA workload. Regional jets need more separation than do the large jets operated by the air carriers, and the regional jets fly at the same altitudes as do larger jets, increasing congestion at the higher altitudes. In certain large hubs, such as Chicago O'Hare, the change in the mix of commercial operations is expected to be even greater. For the period 2005 to 2015, commercial activity increases at an average rate of 2.6 percent per year.

Commercial activity growth averages 2.8 percent annually during the 12-year forecast period, increasing from 24.2 to 34.0 million. Noncommercial activity increases at an average of 1.6 percent annually, from 38.5 million in 2003 to 46.5 million in 2015.

Forecasts for individual airports are contained in the FAA's Terminal Area Forecast and are available at the following website: <http://www.apo.data.faa.gov/>.

FAA Towers

In 2003, operations at the 266 FAA towered airports totaled 47.0 million, down 3.2 percent from 2002. For the 12-year forecast period, operations at FAA towered airports increase 2.0 percent a year. In absolute numbers, towered operations total 59.4 million in 2015.

Commercial aircraft activity at FAA towered airports is projected to grow 2.8 percent annually during the 12-year forecast period, from 22.5 to 31.5 million, exceeding the level of activity that occurred in 2000 by 2005. Noncommercial activity increases from its current level of 24.5 million to 28.0 million in 2015 (1.1 percent annually), and does not exceed the 2000 level of activity during the forecast period.

Contract Towers

In 2003, operations at the 218 contract towered airports totaled 15.7 million, a 3.6 percent decrease from 2002. The forecast assumes that 13 new contract towers are added in 2004. The vast majority of the increased activity at these towers is general aviation and military activity. During the 12-year forecast period, operations at contract towered airports increase at an annual rate of 2.5 percent, totaling 21.1 million in 2015. The additional activity of the new towers

provides for significant growth in contract tower operations in both 2004 (7.4 percent) and 2005 (8.9 percent). Thereafter growth in contract tower activity will moderate.

Commercial aircraft activity at contract towered airports grows an average of 3 percent annually during the 12-year forecast period, increasing from 1.7 million to 2.5 million. Noncommercial activity grows slower, averaging 2.4 percent annually, increasing from 14.0 million in 2003 to 18.6 million in 2015.

INSTRUMENT OPERATIONS²

Combined FAA and Contract Towers

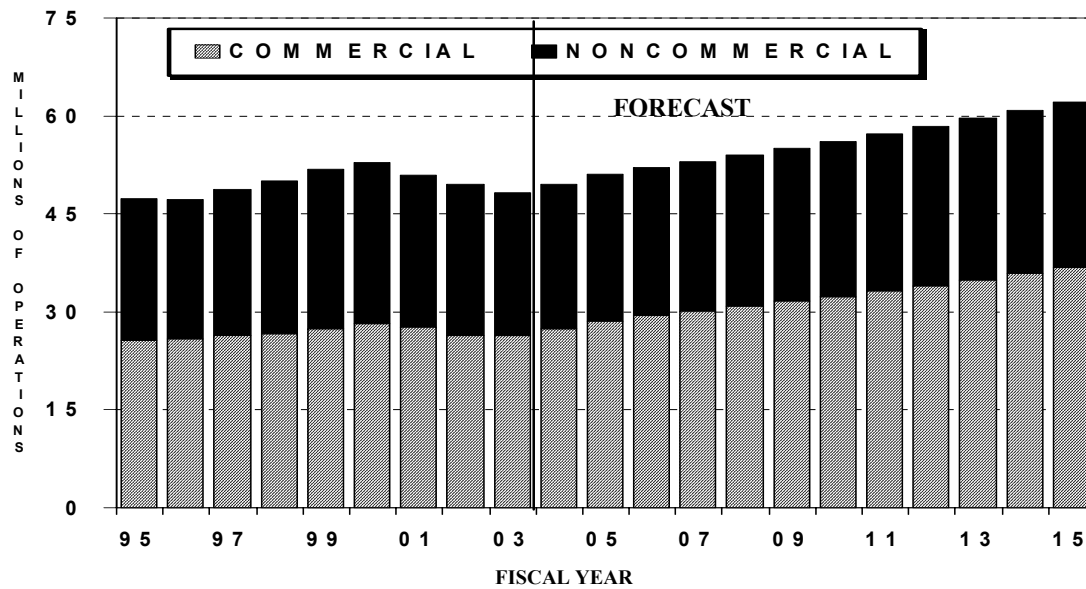
During the forecast period, combined instrument operations increase from 48.2 million operations in 2003 to 62.1 million operations in 2015, averaging 2.1 percent annually. In 2015, FAA towers will account for about 98.3 percent of combined instrument operations.

The mix of instrument operations is expected to change during the forecast period. Both the air carrier and commuter/air taxi share of total instrument operations increase significantly share over the forecast period (from 29.0 to 31.5 percent, and from 25.5 to 27.7 percent, respectively). General aviation's share declines from 38.6 percent to 35.4 percent over the 12-year forecast period.

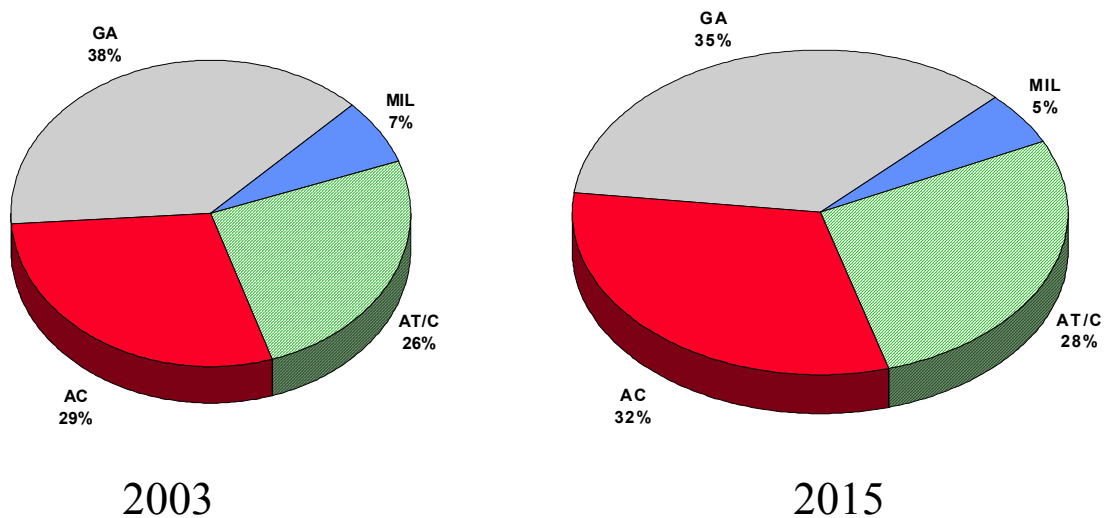
Air carrier instrument operations are forecast to increase 2.2 percent in 2004, then increase

² Instrument operations include arrivals and departures at both primary and secondary airports as well as overflights. Thus instrument operations totals at FAA towers are generally higher than aircraft operation counts at the same towers.

INSTRUMENT OPERATIONS AT AIRPORTS WITH FAA AND CONTRACT TRAFFIC CONTROL SERVICE



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4.4 percent in 2005 and grow 2.7 percent annually thereafter. During the entire 12-year forecast period, air carrier instrument operations increase 2.8 percent annually from 14.0 million to 19.6 million by 2015. Commuter/air taxi operations increase 5.2 percent per year through 2005, then grow 2.3 percent per year thereafter. For the 12-year forecast period, commuter/air taxi operations grow 2.8 percent annually, increasing from 12.3 million to 17.2 million.

General aviation operations rise 1.7 percent in 2004 and increase steadily thereafter and grow an average of 1.4 percent annually during the forecast period, increasing from 18.6 million to 22.0 million operations. Military activity decreased 8.3 percent in 2003 to 3.3 million, and remains at that level for the balance of the forecast.

During the 12-year forecast period, commercial activity increases 2.8 percent annually, from 26.3 million to 36.8 million. Noncommercial activity is forecast to increase 1.2 percent annually, from 21.9 million in 2003 to 25.3 million in 2015.

FAA Towers

Instrument operations at FAA towered airports are projected to increase 2.8 percent in 2004 with increases in all activity categories except military activity. For the 12-year forecast period, instrument operations at FAA towered airports increase at an average annual rate of 2.1 percent. In absolute numbers, FAA towered instrument operations reach 61.0 million in 2015.

Commercial instrument operations at FAA towered airports increase 3.9 percent in 2004 and 4.5 percent in 2005 mirroring the rebound in demand for commercial air transport. During the period 2005 to 2015, commercial instrument operations at FAA towered airports grow 2.6 percent annually. For the entire 12-year

forecast period, commercial instrument operations increase from 25.8 million to 36.1 million, a rate of 2.8 percent annually. Noncommercial activity expands 1.2 percent annually, from 21.6 million in 2003 to 24.9 million in 2015.

Contract Towers

For the 12-year forecast period, instrument operations at contract-towered airports increase 2.1 percent a year, totaling 1.04 million in 2015.

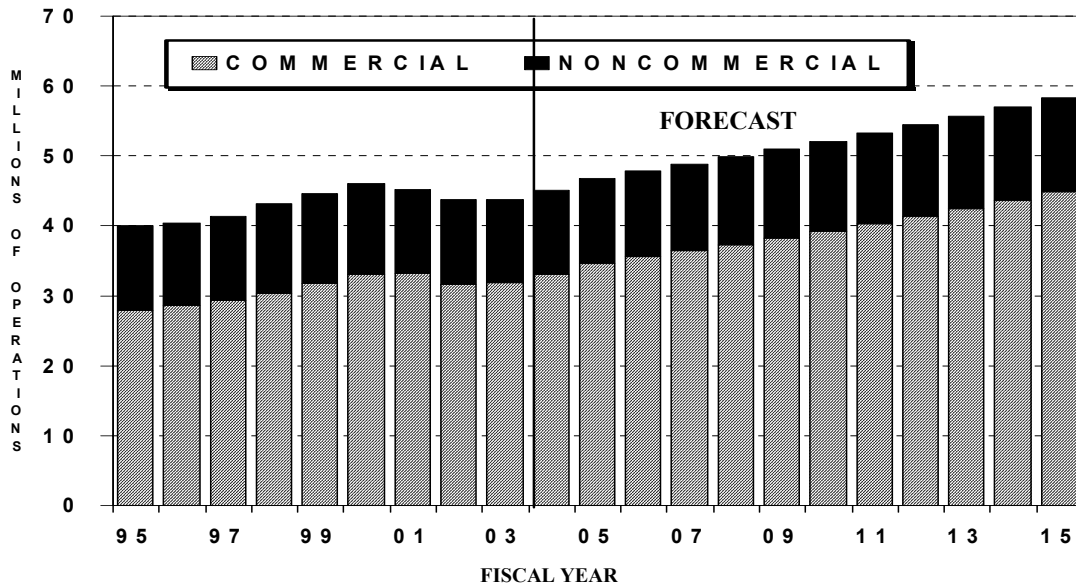
Commercial instrument operations at contract-towered airports grow at an average annual rate of 2.8 percent during the 12-year forecast period, increasing from 471,100 to 658,600. Noncommercial activity is forecast to increase from 342,300 in 2003 to 385,900 in 2015, growing at an average annual rate of 1.0 percent.

CENTER ACTIVITY

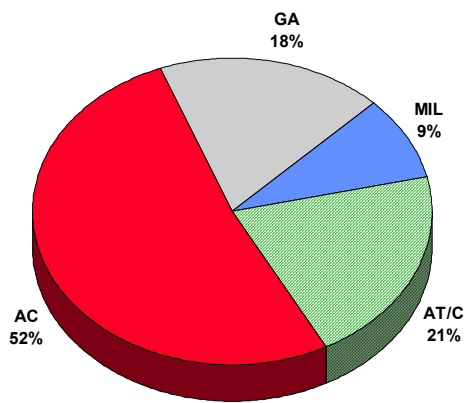
During the 12-year forecast period, the number of aircraft handled at centers increases 2.4 percent annually, expanding from 43.7 million aircraft handled in 2003 to 58.4 million in 2015. Aircraft handled rise 3.2 percent in 2004 with the largest increases occurring in commuter/air taxi and air carrier activity. Following a 3.6 percent increase in 2005, growth in aircraft handled averages 2.2 percent during the period 2005 to 2015.

The number of air carrier aircraft handled at centers is forecast to increase from 22.7 million in 2003 to 32.1 million in 2015, a 2.9 percent annual growth rate. Air carrier aircraft handled increase 3.0 percent in 2004 and 4.4 percent in 2005, then grow at an average rate of 2.7 percent per year between 2005 and 2015.

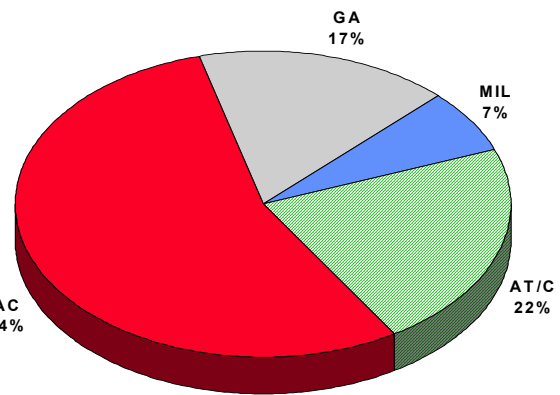
IFR AIRCRAFT HANDLED AT FAA AIR ROUTE TRAFFIC CONTROL CENTERS



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2003



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Commuter/air taxi aircraft handled are expected to increase by 5.2 percent per year through 2005 and grow 2.8 percent annually for the 12-year forecast period, increasing from 9.1 million to 12.8 million. The relatively strong growth during the first three years of the forecast period reflects increases in the commuter stage length during this period.

General aviation aircraft handled increase 2.2 percent in 2004 and continue to increase steadily to total 9.7 million in 2015 (1.6 percent annual growth). Military activity decreased 1.7 percent in 2003 to 3.86 million and remains at that level throughout the forecast period.

Commercial activity grows at an average annual rate of 2.9 percent during the forecast period, increasing from 31.9 million to 44.9 million. Noncommercial activity increases 1.1 percent annually, increasing from 11.9 million in 2003 to 13.5 million in 2015.

The commercial aircraft activities' share of center workload is forecast to increase from 72.9 percent in 2003 to 76.8 percent in 2015. Between 2003 and the year 2015, the air carrier share is forecast to increase from 52.0 to 54.9 percent, while the commuter/air taxi share increases from 20.9 to 21.9 percent.

FLIGHT SERVICE STATION ACTIVITY

The introduction of new technology for flight service applications has significantly changed the operating environment of the flight service system. Viewed in the larger context of the total National Airspace System, the recent declining trend in non-automated flight services do not necessarily indicate declining demand for total flight planning services. Rather, they may indicate that demand is being met through

increased use of automation and new system capabilities resulting in increased efficiency and productivity.

Non-automated Service

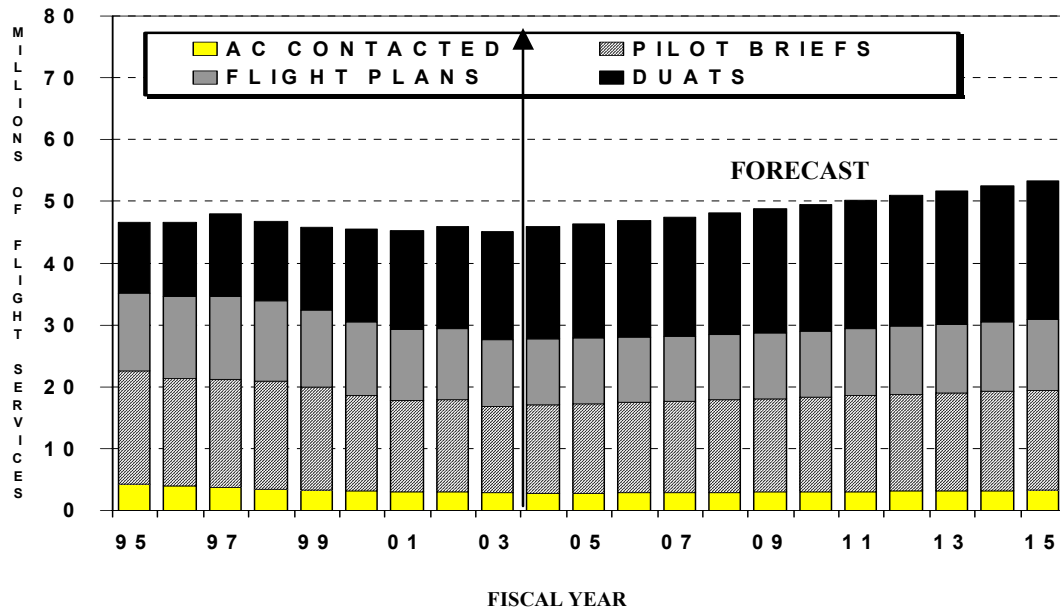
Total traditional (non-automated) flight services originating at FAA flight service stations are projected to post a small increase in 2004. In absolute numbers, the number of total flight services is expected to increase slightly to 27.8 million in 2004. For the balance of the forecast period FSS activity is projected to increase at modest rates. By the end of the forecast period, total flight services provided by the FAA flight service stations are projected to total 30.5 million.

The number of pilot briefings is projected to increase 2.3 percent to 7.17 million in 2004, and continue increasing slowly throughout the remainder of the forecast period. Over all, pilot briefs are projected to increase from 7.01 million in 2003 to 8.10 million in 2015, an average annual rate of 1.2 percent.

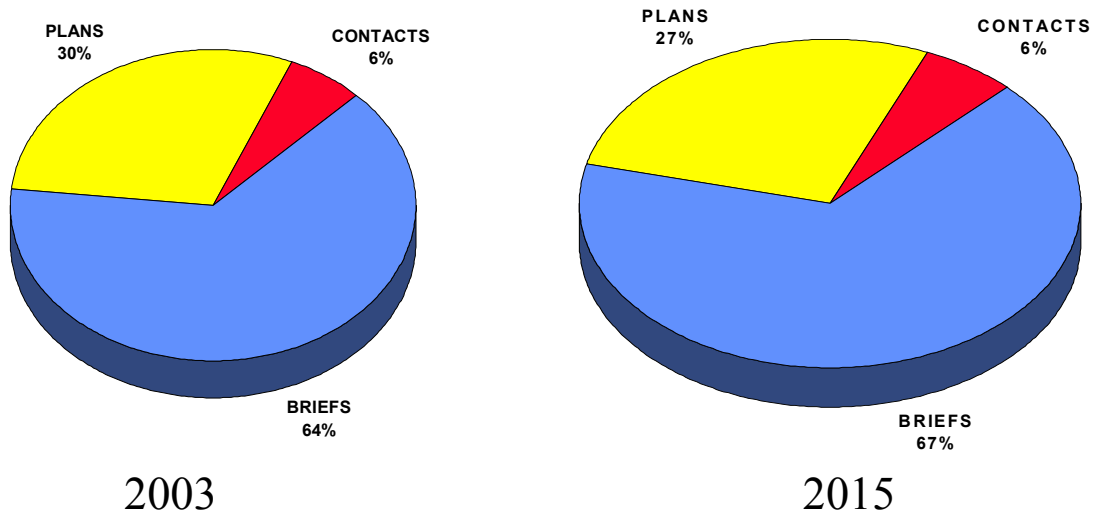
FSS flight plans originated at flight service stations are projected to decline 1.5 percent in 2004. After declining slightly through 2006, total flight plans originated are forecast to grow 0.9 percent per year for the duration of the forecast to total 5.7 million by the year 2015.

The number of aircraft contacted is forecast to decline 1.9 percent in 2004 and then increase steadily for the balance of the forecast. Aircraft contacted in 2015 total 3.2 million, up from 2.8 million in 2003, a 1.1 percent average annual increase.

FLIGHT SERVICES ORIGINATED AT FAA FLIGHT SERVICE STATIONS



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Automated Service

Several factors resulting from automation will tend to dampen the growth in traditional FSS workload measures, as currently defined. First, pilots can now obtain weather briefings through the Telephone Information Briefing System (TIBS), which does not require contact with a flight service specialist, and is not, therefore, included in the FSS pilot briefings count.

Second, private weather briefing vendors, participating in memorandums of agreement with the FAA, can also provide weather briefings and file flight plans for their customers without going through an FSS. Third, starting February 1990, DUATS became operational. Using DUATS, pilots with access to a computer, modem, and telephone can directly access a national weather data base for weather briefings and flight plan filing without ever going through an FSS.

This automated access may be through the pilot's own computer or through those of fixed-based operators offering the service to their customers. None of the flight planning services provided through the above sources are included in the FSS workload measures.

During 2003 there were a total of 7.45 million DUATS transactions. If each transaction involves a weather briefing, this represents 7.45 million pilot briefs. In addition, approximately 1.3 million flight plans were filed through the DUATS system. Using the weighted total flight services formula (two

times the sum of pilot briefs and flight plans filed), this translates into approximately 17.5 million total flight services that are not included in the FAA flight service station workload measure.

DUATS transactions are projected to increase from 7.5 million in 2003 to 7.8 million in 2004 (up 4.0 percent). During the period 2003 through 2015, DUATS transactions are forecast to increase at an average annual rate of 2.2 percent, reaching 9.6 million in 2015.

For the entire forecast period, flight plans filed through DUATS are expected to increase from approximately 1.2 million to 1.6 million in 2015, a 1.9 percent average annual increase. By the year 2015, total services provided through DUATS are projected to account for 22.5 million flight services, or 42.2 percent of total system services.

Total Flight Services

The decline in activity at FAA flight service stations since the mid 1980s is the result of the process of FSS consolidation, and the growing acceptance and utilization of DUATS services.

Total flight services, including non-automated and automated services, are expected to increase 0.4 percent in 2004 to 46.0 million. By 2015 total flight services are forecast to reach 53.3 million, an average annual increase of 1.4 percent over the 12-year forecast period.